In the claims

1. (original) Method for use in a wireless network, comprising the steps of:

classifying packets (16) destined for various bearers of various mobile terminals according to differing classes,
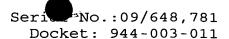
storing (20) said classified packets according to said differing classes and according to said various bearers of various destination mobile terminals,

scheduling (22) some or all of said stored packets for possible transmission according to said various bearers of various destination mobile terminals during a cycle of a packet scheduler,

scheduling (10) some or all of said stored packets that have been scheduled for possible transmission for actual transmission according to said differing classes, and

transmitting (28) said stored packets scheduled for actual transmission during transmission time intervals occurring during said cycle of said packet scheduler.

2. (original) The method of claim 1, wherein said step of scheduling (10) some or all of said stored packets that have been scheduled for possible transmission for actual transmission according to said differing classes, comprises the step of scheduling equal amounts of data for transfer from said different classes.

3. (original) The method of claim 1, wherein said step of scheduling (10) some or all of said stored packets that have been scheduled for possible transmission for actual transmission according to said differing classes, comprises the steps of determining transmission capacity of a transmission time interval and dividing said capacity into equal portions, one portion for each of said differing classes.

4. (original) The method of claim 1, wherein said step of scheduling (10) some or all of said stored packets that have been scheduled for possible transmission for actual transmission according to said differing classes, comprises the steps of:

determining service types of said differing

classes,

determining transmission capacity of a transmission time interval, and

allocating the overall capacity of the transmission time interval based on said

service type.

5.   (currently amended) The method of claim 1, wherein said step of
scheduling (10) some or all of said stored packets that have been scheduled for
possible transmission for actual transmission according to said differing classes,
comprises the steps of:

measuring amounts of packets stored according to said differing classes,

determining a capacity of a transmission time interval, and

dividing the capacity of the transmission time interval according to said
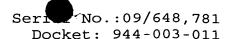~~measured buffer levels~~amounts of packets stored.

6.   (original) The method of claim 1, wherein said step of scheduling (10)
some or all of said stored packets that have been scheduled for possible transmission
for actual transmission according to said differing classes, further comprises the steps
of:

determining priorities of said packets stored according to said differing classes,

determining transmission capacity of a transmission time interval, and

allocating said capacity based on said priorities.

7.   (original) The method of claim 1, wherein said step of scheduling (10)
some or all of said stored packets that have been scheduled for possible transmission
for actual transmission according to said differing classes, further comprises the steps
of:

determining from a priority table priorities of said packets stored according to
said differing classes,

determining a capacity of a transmission time interval, and

allocating said capacity based on said priorities.

8.   (original) The method of claim 1, wherein said differing classes are indicative of quality-of-service requested for said packets in transit outside said wireless network before arriving at said wireless network, said method further comprising the steps of:

determining if said packets actually received said requested quality-of-service in transit outside said wireless network, and wherein said step of classifying comprises the step of classifying said packets according to said requested quality-of-service if said packets actually received the requested quality-of-service in transit outside said wireless network, and otherwise classifying said packets according to a quality of service actually experienced by said packets in transit outside said wireless network.

9.   (original) Apparatus for use in a wireless network, comprising:

packet classifier (16) for classifying packets destined for various bearers of various mobile terminals according to differing classes,
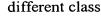
packet storage medium (20) for storing said classified packets according to said differing classes and according to said various bearers of various destination mobile terminals,

packet scheduler (22) for scheduling some or all of said stored packets for possible transmission according to said various bearers of various destination mobile terminals during a cycle of said packet scheduler,

quality-of-service (QoS) scheduler (10) for scheduling some or all of said stored packets that have been scheduled for possible transmission for actual transmission according to said differing classes, and

transmitter for transmitting some or all of said packets scheduled for actual transmission during transmission time intervals occurring during said cycle of said packet scheduler.

10.   (original) The apparatus of claim 9, wherein said QoS scheduler comprises means for scheduling equal amounts of data for transfer from said different classes.

11.   (original) The apparatus of claim 9, wherein said QoS scheduler comprises means for determining transmission capacity of a transmission time interval and means for dividing said capacity into equal portions, one portion for each of said differing classes.

12.   (original) The apparatus of claim 9, wherein said QoS scheduler comprises:

      means for determining service types of said differing classes,

      means for determining capacity of a transmission time interval, and

      means for allocating the overall capacity of the transmission time interval based on said service types.

13.   (currently amended) The apparatus of claim 9, wherein said QoS scheduler comprises:

      means for measuring amounts of packets stored according to said differing classes,

      means for determining a capacity of a transmission time interval, and

      means for dividing the capacity of the transmission time interval according to ~~said measured buffer levels~~said amounts of packets stored.

14.   (original) The apparatus of claim 9, wherein said QoS scheduler comprises:

      means for determining priorities of said packets stored according to said differing classes,

      means for determining capacity of a transmission time interval, and

      means for allocating said capacity based on said priorities.

15.   (original) The apparatus of claim 9, wherein said QoS scheduler comprises:

      means for determining from a priority table priorities of said packets stored according to said differing classes,

      means for determining a capacity of a transmission time interval, and

means for allocating said capacity based on said priorities.

16.   (original) The apparatus of claim 9, wherein said differing classes are indicative of quality-of-service requested for said packets in transit outside said wireless network before arriving at said wireless network, said apparatus further comprising:

means for determining if said packets actually received said requested quality-of-service in transit outside said wireless network, and wherein said packet classifier comprises means for classifying said packets according to said requested quality-of-service if said packets actually received the requested quality-of-service in transit outside said wireless network, and otherwise for classifying said packets according to a quality of service actually experienced by said packets in transit outside said wireless network.

17.   (currently amended) Method, comprising the steps of:
receiving a packet in a first network from a second network, said packet having information relating to a quality-of-service requested for said packet,

determining if said packet actually ~~requires~~experienced said requested quality-of-service over said second network, and

classifying said packet according to said requested quality-of-service and providing said packet with said requested quality-of-service over said first network if said packet actually experienced said requested quality-of-service over said second network, otherwise classifying said packet according to ~~a~~said quality-of-service actually experienced by said packet over said second network and providing said packet with a quality-of-service over said first network corresponding to said quality-of-service actually experienced by said packet over said second network.

18.   (original) The method of claim 17, further comprising the step of:
notifying a sender of said packet of said quality-of-service actually experienced by said packet over said second network.

19.   (currently amended) Apparatus for use in a wireless network, comprising:

means for receiving a packet in a first network from a second network, said packet having information relating to a quality-of-service requested for said packet;

means for determining if said packet actually ~~requires~~experienced said requested quality-of-service over said second network; and

means for classifying said packet according to said requested quality-of-service and providing said packet with said requested quality-of-service over said first network if said packet actually experienced said requested quality-of-service over said second network, otherwise classifying said packet according to ~~a~~said quality-of-service actually experienced by said packet over said second network and providing said packet with a quality-of-service over said first network corresponding to said quality-of-service actually experienced by said packet over said second network.

20.   (original) The apparatus of claim 19, further comprising:

means for notifying a sender of said packet of said quality of service actually experienced by said packet over said second network.